

Docket No. 242544US2RD/shb

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

IN RE APPLICATION OF: Nao MISHIMA, et al.

SERIAL NO: 10/657,174

GAU: 2614

FILED: September 9, 2003

EXAMINER:

FOR: FRAME INTERPOLATION AND APPARATUS USING FRAME INTERPOLATION

**INFORMATION DISCLOSURE STATEMENT UNDER 37 CFR 1.97**

COMMISSIONER FOR PATENTS  
ALEXANDRIA, VIRGINIA 22313

SIR:

Applicant(s) wish to disclose the following information.

**REFERENCES**

- ☒ The applicant(s) wish to make of record the references listed on the attached form PTO-1449. Copies of the listed references are attached, where required, as are either statements of relevancy or any readily available English translations of pertinent portions of any non-English language references.
- ☐ A check or credit card payment form is attached in the amount required under 37 CFR §1.17(p).

**RELATED CASES**

- ☒ Attached is a list of applicant's pending application(s) or issued patent(s) which may be related to the present application. A copy of the patent(s), together with a copy of the claims and drawings of the pending application(s) is attached along with PTO 1449.
- ☐ A check or credit card payment form is attached in the amount required under 37 CFR §1.17(p).

**CERTIFICATION**

- ☐ Each item of information contained in this information disclosure statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of this statement.
- ☐ No item of information contained in this information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application or, to the knowledge of the undersigned, having made reasonable inquiry, was known to any individual designated in 37 CFR §1.56(c) more than three months prior to the filing of this statement.

**DEPOSIT ACCOUNT**

- ☒ Please charge any additional fees for the papers being filed herewith and for which no check or credit card payment is enclosed herewith, or credit any overpayment to deposit account number 15-0030. A duplicate copy of this sheet is enclosed.

Respectfully submitted,

OBLON, SPIVAK, McCLELLAND,  
MAIER & NEUSTADT, P.C.

  
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INTERPOLATION

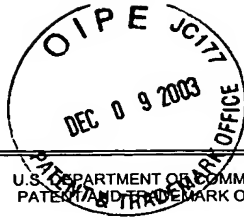
**STATEMENT OF RELEVANCY**

**Reference AO (JP 2528103) on Form PTO 1449:**

This reference shows a symmetric search to detect a motion vector for an interpolated frame. This method, however, often does not detect the motion vector represented the real objects motion.

**Reference AP (JP 2000-224593) on Form PTO 1449:**

This reference shows a frame interpolation method of dividing and assigning two motions. But, this method does not solve the problem of crevice and overlap in interpolated frame.

Form PTO 1449  
(Modified)U.S. DEPARTMENT OF COMMERCE  
PATENT AND TRADEMARK OFFICE

ATTY DOCKET NO.

242544US2RD

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## LIST OF REFERENCES CITED BY APPLICANT

APPLICANT

Nao MISHIMA, et al.

FILING DATE

September 9, 2003

GROUP

2614

## U.S. PATENT DOCUMENTS

| EXAMINER<br>INITIAL |    | DOCUMENT<br>NUMBER | DATE | NAME | CLASS | SUB<br>CLASS | FILING DATE<br>IF APPROPRIATE |
|---------------------|----|--------------------|------|------|-------|--------------|-------------------------------|
|                     | AA |                    |      |      |       |              |                               |
|                     | AB |                    |      |      |       |              |                               |
|                     | AC |                    |      |      |       |              |                               |
|                     | AD |                    |      |      |       |              |                               |
|                     | AE |                    |      |      |       |              |                               |
|                     | AF |                    |      |      |       |              |                               |
|                     | AG |                    |      |      |       |              |                               |
|                     | AH |                    |      |      |       |              |                               |
|                     | AI |                    |      |      |       |              |                               |
|                     | AJ |                    |      |      |       |              |                               |
|                     | AK |                    |      |      |       |              |                               |
|                     | AL |                    |      |      |       |              |                               |
|                     | AM |                    |      |      |       |              |                               |
|                     | AN |                    |      |      |       |              |                               |

## FOREIGN PATENT DOCUMENTS

|  |    | DOCUMENT<br>NUMBER | DATE       | COUNTRY                                  | TRANSLATION |    |
|--|----|--------------------|------------|--|-------------|----|
|  |    |                    |            |  | YES         | NO |
|  | AO | 2528103            | 08/28/1996 | JAPAN (with partial English translation) |             |    |
|  | AP | 2000-224593        | 08/11/2000 | JAPAN (with English Abstract)            |             | X  |
|  | AQ |                    |            |  |             |    |
|  | AR |                    |            |  |             |    |
|  | AS |                    |            |  |             |    |
|  | AT |                    |            |  |             |    |
|  | AU |                    |            |  |             |    |
|  | AV |                    |            |  |             |    |

## OTHER REFERENCES (Including Author, Title, Date, Pertinent Pages, etc.)

|  |    |  |
|--|----|--|
|  | AW |  |
|  | AX |  |
|  | AY |  |
|  | AZ |  |

☐ Additional References sheet(s) attached

Examiner

Date Considered

\*Examiner: Initial if reference is considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.